

Program Policy
Fishery Products Treated with Carbon Monoxide and Filtered Smoke Gas

In 1997, the USDC Seafood Inspection Program became aware of a process that employs a filtered wood smoke that at least one processing company, Hawaii International Seafoods, Inc., termed "tasteless smoke" (TS). The purpose of its application is to retard the development of the brown color that rapidly occurs in tuna flesh after it has been cut. Although carbon monoxide (CO) is a component of the "tasteless smoke", its concentration is similar to that found in normal wood smoke. Unlike some other processes that result in the color of the product being enhanced or brightened and fixed through the direct use of CO at significantly higher concentrations and/or longer exposure times, this process, when used with appropriate controls, reportedly does not enhance the natural flesh color of tuna, and the color of the flesh eventually degrades over time. There is no evidence to suggest that "tasteless smoke" poses a health risk to the consumer from the ingestion of treated product.

On September 3, 1998, Richard Cano signed a policy indicating that only seafood treated with "tasteless smoke" gas from verified facilities named in the policy would be permitted to be lot inspected and bear our mark once it arrived in the United States. The list of accepted facilities would be updated as necessary.

In May 1999, FDA issued Import Bulletin 16B-95 which included instructions that tuna treated with "tasteless smoke" or CO should be:

- labeled as processed foods that have been treated with CO or TS,
- not misrepresented as fresh frozen seafood by their label, and
- near normal in flesh color

As a result of Import Bulletin 16B-95, the USDC Seafood Inspection Program policy was expanded to include facilities treating products with carbon monoxide mixtures.

Hawaii International has provided data to support their view that "tasteless smoke" is GRAS by submitting a GRAS notification document to FDA's Office of Premarket Approval. On March 10, 2000 FDA has responded that the agency has no questions at this time regarding the conclusion of Hawaii International that tasteless smoke is GRAS for use on raw tuna, before it is frozen, to preserve its taste, aroma, texture, and color. The agency has not, however, made its own determination regarding the GRAS status of this use of tasteless smoke. The FDA response further reiterates that any firm who markets tuna that has been preserved with tasteless smoke is responsible for ensuring that such tuna is neither adulterated nor misbranded under sections 402 and 403 of the Federal Food, Drug, and Cosmetic Act.

USDC Seafood Inspection Program Policy

USDC has implemented a policy within its voluntary Seafood Inspection Program to lot inspect and certify tuna products treated with filtered wood smoke or carbon monoxide only if those products originate from firms that USDC has verified employ acceptable process controls. The products must also be in compliance with all other applicable legal and regulatory requirements.

Verification Protocol

The verification protocol encompasses several parameters. First, the firm's HACCP and sanitation operation are evaluated for compliance to FDA regulations, in particular 21CFR Part 123. Color readings are taken of a sampling of tuna steaks using a HunterLab color difference meter. Steaks are sampled with readings taken after the first cut, after exposure to the gas, and at thirty, ninety, and one hundred fifty-day intervals in frozen storage. After frozen storage, at each of the intervals, the steaks are thawed and stored chilled under conditions similar to that found in retail stores. Each day for the next five days, the steaks are analyzed for color readings and sensory indicators. All readings are charted and analyzed using HunterLab software. Photographs are taken at each stage of one steak that has been treated and a control.

Samples of the gas are also taken at the source and analyzed for various constituents, including carbon monoxide. Histamine analyses are also performed on representative product samples.

Audits of production facilities are performed twice per year.

Additional Activities

In an effort to determine criteria to objectively describe "near normal in flesh color", the USDC Seafood Inspection Program is collecting color data at each facility. This data will be used to develop a process/color specification that will be evaluated with industry assistance during the next year. Additional tests are planned to evaluate the effect of filtered smoke and carbon monoxide on tuna at varied stages of deterioration.

Approved Facilities

Below are the facilities currently in compliance with this policy. This list supersedes the list of September 18, 2001 and will be replaced as new facilities are added or deleted. Unless indicated, all vacuum-packed product forms must be in the frozen state. The Program is aware that other fish species are being treated with the process, such as tilapia, swordfish, and mahi-mahi. It is planned that color data will be collected on these species as well. Until then, the Program will not hinder commerce by limiting the lot inspection to only tuna products from these facilities, as long as all other USFDA and USDC requirements are met. Questions should be directed to:

USDC Seafood Inspection Program
1315 East-West Highway, F/SI
Silver Spring, Maryland 20910
Phone: 301-713-2355
FAX: 301-713-1081
E-Mail: Kenneth.Aadsen@noaa.gov
E-Mail: Steven.Wilson@noaa.gov

Firms new to the list are indicated with a  symbol.

Facilities Utilizing Filtered Wood Smoke

AFI International Trading Corporation
Tambler
General Santos City, Philippines
Phone: 632-838-4901
FAX: 632-838-4675
E-Mail: tonym@netasia.net

Angel Seafood Corporation
Tambler
General Santos City, Philippines
Phone: 6383-553-8848
FAX: 6383-552-2794
E-Mail: amerasia@mkt.webling.com

Facilities Utilizing Carbon Monoxide Gas Mixtures

Cv. Lautan Niaga Jaya
Perum Prasarana Perikanan Samudra
Jalan Muara Baru Ujung
Wisma Muara Baru No. 3
Jakarta Utara 14440, Indonesia
Phone: 6221-661-7874
FAX: 6221-661-9641
E-Mail: meavonz@hotmail.com

Pt. Balinusa Windumas
Jalan Ikan Tuna 2
Pelabuhan Benoa, Denpasar
Bali, Indonesia
Phone: 62361-722688
FAX: 62361-723636
E-Mail: balinusa@dps.centrin.net.id

East Asia Fish Company, Inc.

EAFCI Building
Davao Fish Port Complex
Daliao Toril District
Davao City, Philippines
Phone: 6382-291-3397
FAX: 6382-291-3398
E-Mail: stjames@epic.net

Evergreen Enterprises

#2 Tomas Claudio St.
7000 Zamboanga City
Philippines

Plant Location

Philippine Kingford, Inc.
Tambler
General Santos City, Philippines
Phone: 6383-380-7301
FAX: 6383-380-7333
E-Mail: kingford@pacific.net.ph

FrigoLab "San Mateo"

Via San Mateo, Km 4 ½
Manta, Ecuador
Phone: 593-5-628701
FAX: 593-5-628688

Mommy Gina Tuna Resources

004 Cabe Subdivision, Lagao Road
Tambler
General Santos City, Philippines
Phone: 6383-552-8136
FAX: 6383-552-2654
E-Mail: mgtr@gsc.weblinq.com

**Philippine Cinmic Industrial Corp.**

C/O 181 Roxas Boulevard, Baclaran
1700 Paranaque, Metro Manila
Philippines

Plant Location

Philippine Kingford, Inc.
Tambler
General Santos City, Philippines
Phone: 6383-380-7301
FAX: 6383-380-7333
E-Mail: kingford@pacific.net.ph

Philippine Kingford, Inc.

181 Roxas Boulevard, Baclaran
1700 Paranaque, Metro Manila
Philippines

Phone: 6383-380-7301

FAX: 6383-380-7333

E-Mail: kingford@pacific.net.ph



Phillips Seafood

2nd Floor Refrigeration Building
Fish Port Complex
Brgy. Tambler, General Santos City
Philippines 9500

Phone: 6383-302-5957

FAX: 6383-302-5958

E-Mail: phillips@gsc.webling.com

Pt. Bonecom

JL Muara Baru Ujung, Blok L, No. 1
Jakarta Utara 14440, Indonesia

Phone: 6221-661-6686

FAX: 6221-662-6686

E-Mail: tjandra@bonecom.co.id

Pt. Fajar Cakrawala Sumbindo

Jalan Ikan Tuna III
Pelabuhan Benoa Bali
Indonesia

Phone: 62361-721386

FAX: 62361-724009

E-Mail: sumbindo@indo.net.id

Pt. Hatindo Makmur

Kompleks Pelabuhan Benoa
Jalan Ikan Tuna III No. 2
Benoa, Denpasar

Bali, Indonesia 80223

Phone: 62361-724095

FAX: 62361-724097

Pt. Intimas Surya

Jalan Ikan Tuna Blok B2
Pelabuhan Benoa
Bali, Indonesia

Phone: 62361-724246

FAX: 62361-721159

E-Mail: jorgih@indo.net.id

Pt. Intisamudera Citra Perkasa

Jalan Ikan Tunaraya Blok No. 1
Pelabuhan Benoa, Denpasar Bali
Indonesia

Phone: 62361-724526

FAX: 62361-724527

E-Mail: shihchihhsing@kimo.com

Pt. Lucky Samudra Pratama

Jalan Muara Baru Ujung
Blok F No.1
Jakarta Utara, 14440
Indonesia

Phone: 6221-662-3275

FAX: 6221-662-3276

E-Mail: misai@cbn.net.id

Pt. Makmur Jaya Sejahtera

Jalan Ikan Tuna Blok B2
Pelabuhan Benoa
Bali, Indonesia

Phone: 62361-724246

FAX: 62361-721159

E-Mail: jorgih@indo.net.id

Pt. Minasakti Kichitomindo

Kompleks Pelabuhan Perikanan Samudera
Jakarta

Jalan Dermaga Timur Kel. 2 No. 15
Penjaringan, Jakarta Utara 14440
Indonesia

Phone: 6221-669-6076

FAX: 6221-669-6056

E-Mail: minasakti@link.net.id

Santa Cruz Trading Company

Dole Compound, Calumpang
General Santos City, Philippines

Phone: 6383-553-5387

FAX: 6383-553-2194

E-Mail: stacruz@gslink.net

Truc An Co., Ltd.

Lot A12-13
Suoi Dau Industrial Zone
Dien Khanh District
Khanh Hoa Province, Vietnam

Phone: 8458-743173

FAX: 8458-821175

E-Mail: truc-an@dng.vnn.vn